

From Supermarket Shelves to Dark Stores: Sequencing E-Grocery Transformation in Jabodetabek

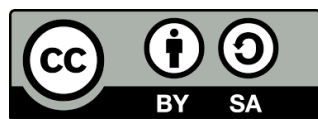
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Abstract

Indonesian e-grocery platforms built on supermarket shelves and ride-hailing courier networks now face a market environment that expects 30-minute delivery, while modern grocery retail growth has slowed. This study examined how an Indonesian online grocery platform restructured its Jabodetabek operations from 2024 to 2025, identified the remaining operational constraints, and determined the sequence in which improvement levers should be deployed. A single-case mixed-methods design was employed, combining twelve months of transactional records (406,021 delivered orders across 19 stores), ten semi-structured interviews involving five operational roles analyzed through thematic coding, and structured diagnostics using PESTEL analysis, competitor benchmarking, value chain analysis, Business Model Canvas, and SWOT analysis. The regional exit strategy was justified based on order density, basket size, delivery distance, and contribution margin considerations. Consolidation into seven dark stores reduced fulfillment time by 59% and order-to-door time by 35%; however, it shifted the primary operational constraint toward travel distance. Practitioners identified the remaining constraints as store layout, information latency, and courier handover processes rather than traffic conditions. Five improvement levers were sequenced based on executability and reversibility: courier contracts, margin architecture, handover discipline, tiered delivery promises, and a density-gated network strategy. Per-order contribution improved from approximately negative Rp 10,633 to negative Rp 5,894 before any additional lease investments were made. The study concludes that a trigger-based roadmap should replace fixed launch schedules, with network expansion capital committed only after operational thresholds are achieved.

INTRODUCTION

Grocery delivery in Indonesia's largest cities is being repriced around speed. The 11- to 30-minute delivery window is now the largest segment of the country's quick-commerce market, and Greater Jakarta represents its largest provincial market base (Mordor Intelligence, 2025). Specialists deliver this promise through small urban warehouses, commonly referred to as dark stores, supported by dedicated contracted riders, and international evidence on this model is consistent: it performs well where order density is high and struggles where demand density is insufficient (Schorung, 2024; Yang et al., 2024). Indian operators have scaled this model in dense metropolitan areas (Agarwal, 2026; Raut et al., 2026; Siwach, 2026), whereas

several European and Indonesian ventures have closed their dark stores when sufficient order volumes failed to materialize.

The platforms facing the more challenging version of this transition are not specialists but incumbents originally designed for slower delivery promises. Many Indonesian e-grocery services were developed as extensions of supermarket chains: orders were picked from partner stores, inventory was sourced through those partners, and deliveries were assigned to on-demand ride-hailing couriers. This model enabled rapid market entry with minimal fixed costs, reflecting the logic of leveraging existing store networks for online fulfillment (Mkansi & Nsakanda, 2021). However, it was poorly suited to a 30-minute delivery promise and became increasingly vulnerable as the supermarket segment contracted (Sukazi, 2024; Tartanoglu-Bennett & Tindal, 2022).

This article examines one such incumbent, an Indonesian online grocery company that remains unnamed, during the period from July 2024 to June 2025, when it withdrew from 24 cities and concentrated operations in the Jabodetabek metropolitan area, replaced supermarket-based fulfillment with seven company-operated dark stores, shifted most deliveries to a dedicated rider-partner fleet, and established a 30-minute delivery promise as its strategic ambition. The transition was driven by operational necessity rather than strategic choice. As the supermarket partner's network contracted, product availability at fulfillment points declined, courier waiting times during handovers increased, and each order generated negative margins under the existing partnership structure. Therefore, the company faced the risk of implementing operational redesign in the wrong sequence, as expanding the network before achieving sufficient margin and demand density would increase losses. The quantitative design of the target network, courier economics, and break-even conditions are modeled in detail in the first author's master's thesis (Pribadi, 2026). This article adopts a management perspective by examining issues not fully addressed in those models: whether the restructuring was justified, how operational practitioners identify remaining constraints, how strategic diagnostic tools reinterpret those constraints, and in what sequence improvement levers should be implemented.

The analysis had three objectives: first, to evaluate, using company transaction data, whether the 2024–2025 consolidation was justified and how it affected operational performance; second, to identify where practitioners locate constraints affecting the 30-minute delivery promise and how PESTEL analysis, competitor benchmarking, value chain analysis, the Business Model Canvas, and SWOT synthesis interpret these constraints; and third, to determine the sequence in which remaining improvement levers should be implemented and the triggers that should govern each phase. The contribution of this study is a sequence-based and trigger-based transformation roadmap rather than a fixed launch timeline, supported by evidence from one firm's operational data demonstrating that network-first strategies may deepen losses for second-generation e-grocery operators. To the best of the authors' knowledge, this study is among the first to combine transactional records, practitioner interviews, and structured strategic diagnostics to develop a trigger-gated restructuring roadmap for an incumbent e-grocery platform transitioning toward quick commerce in an emerging market.

Two research streams define this problem. The first concerns the economics of dark stores. Yang et al. (2024) demonstrated through a network planning model that a 30-minute delivery target requires approximately 40% lower fulfillment costs than a 15-minute target, with proximity to demand clusters representing the dominant cost driver. Schorung (2024) reported from field observations in Paris that dark stores processed 150 to 250 orders per day, while operators estimated break-even volumes at 600 to 700 orders, and courier productivity of approximately 2.5 deliveries per hour remained below the required six deliveries per hour. Boysen et al. (2021) reviewed last-mile concepts through which operators balance cost and responsiveness, while Ekren et al. (2025) examined product availability, cost, and emissions in e-grocery fulfillment as interconnected outcomes of operational design choices. Hübner et al. (2016) positioned fulfillment trade-offs within a strategic planning framework and documented picking rates of 80 to 120 items per hour in store-based settings compared with 150 to 300 items or more in purpose-built facilities.

The second research stream concerns consumer preferences and value perceptions. Indonesian evidence suggests that reliability and price are more influential than delivery speed alone. Billman et al. (2024) found that utilitarian motivations, including price, availability, and accuracy, have stronger associations with repurchase intention than speed-related factors, while Monoarfa et al. (2023) showed that push factors related to unreliable incumbent services and pull factors related to convenience explain switching behavior more effectively than delivery time. González-Romero et al. (2025) demonstrated in another market context that narrower delivery windows generate measurable costs for last-mile sustainability. Together, these studies suggest that a reliable delivery promise may create greater value than an excessively fast but difficult-to-maintain promise, forming the basis for the tiered recommendation developed in this study.

Between these two research streams lies an important gap. Network models explain how many facilities are required to support a delivery promise, while consumer studies explain the value customers assign to that promise. However, neither stream fully explains how an incumbent platform with existing stores, employees, contracts, and legacy technology infrastructure should transition from one operational model to another, which elements should be changed first, and when expansion should be postponed. Strategic diagnostic frameworks, including environmental scanning, Porter's (1985) value chain analysis, Osterwalder and Pigneur's (2010) Business Model Canvas, and SWOT analysis (Puyt et al., 2023), are designed to address such questions when supported by measured operational data rather than assumptions. This study applies these frameworks accordingly.

METHOD

This study employed a single-case exploratory mixed-methods design, with quantitative evidence representing the primary analytical component and qualitative evidence providing contextual interpretation. The case firm was an Indonesian online grocery company that operated through a mobile application and was supported by three partners: a supermarket chain, a marketplace technology provider, and an investor, all of which were pseudonymized under a confidentiality agreement. The unit of analysis was the firm's Jabodetabek operation,

which accounted for approximately 88% of national order volume during the observation period.

Three sources of evidence were combined. The first source was the company's transactional records from July 1, 2024, to June 30, 2025, consisting of 406,021 delivered orders across 19 Jabodetabek stores that operated during the observation period. The dataset included order timestamps, store and customer locations, basket values, and unit costs. Order counts were rescaled based on an agreement with the company, while operational metrics such as timestamps, distances, basket values, and unit costs were retained as recorded. The second source consisted of ten semi-structured interviews with participants representing five operational roles: operations area management, hub leadership, sourcing and merchandising, product management, and third-party logistics coordination. A total of 35 question-and-answer pairs were coded using a spreadsheet matrix based on deductive categories, including picking, dispatch, courier operations, technology, and assortment, while additional inductive codes were added when emerging themes were identified. Thematic analysis followed the six-phase approach proposed by Braun and Clarke (2006). Participation was voluntary, and informed consent was obtained. Interview findings were reported at the role level. The third source comprised secondary data, including market reports, competitor service promises, relevant regulations governing rider partnerships (Republik Indonesia, 2021), and previously reviewed academic studies.

The analysis was conducted in four stages aligned with the research objectives. First, the consolidation strategy was evaluated using four dimensions from the company's operational data: store-level order density, basket value, delivery distance, and modeled contribution per order. Second, interview findings were analyzed and compared with transactional data to identify operational constraints, with qualitative evidence explaining the sources of constraints and quantitative evidence measuring their operational impact. Third, five diagnostic frameworks were applied sequentially: PESTEL analysis, competitor benchmarking, Porter's value chain analysis, the Business Model Canvas, and SWOT analysis. Finally, the identified improvement levers were sequenced and assigned implementation triggers. Viability thresholds, including break-even margin, allowable last-mile costs, and order density requirements for store-level sustainability, were adopted from the models reported in Pribadi (2026). This study used these thresholds as analytical inputs rather than reproducing their derivation.

RESULTS AND DISCUSSION

The Consolidation Was Warranted, and It Moved the Constraint

The observation window does not describe a stable operation. Between July 2024 and June 2025 the company wound down every store outside Jabodetabek, with the region's share of national volume falling from 24.4% to 1.3% by May 2025 and to zero in June, and the final orders from the 14 regional stores placed between 30 April and 12 May 2025. Inside Jabodetabek it closed twelve of nineteen stores and opened five purpose-built dark stores: Daan Mogot in West Jakarta in November 2024, Gading Serpong in Tangerang and Lebak Bulus in South Jakarta in January 2025, Pluit in North Jakarta in February 2025 and Cawang in East

Jakarta in April 2025. Two stores from the old estate, Bintaro and Tanjung Duren, survived. Fulfillment from the supermarket partner's shelves ended with the last such order in May 2025.

Table 1 sets the regional and metropolitan operations side by side on the four dimensions that matter for a delivery business. Regional stores averaged 11.3 orders a day against 58.5 in Jabodetabek, a gap of 5.2 times that widened from 3.5 times to 59.7 times over the window as the metropolitan estate densified. The best regional store, at 24.9 orders a day, sat at about an eighth of the lowest break-even density any Jabodetabek lease requires, roughly 202 orders a day at the renegotiated margin (Pribadi, 2026). Regional baskets were 8.1% smaller and regional deliveries 16.5% longer, and the modelled loss per order was 38% deeper. The four dimensions agree, and management's decision to exit is supported by the data it did not have in this form when it decided. The exit is not, however, a permanent verdict: the same test that justified leaving would justify returning if category demand in a regional city grew or if a better margin structure lowered the density a store needs.

Table 1. The regional exit tested on the company's own data, July 2024 to June 2025

Dimension	Jabodetabek	Outside Jabodetabek	Reading
Orders per store per day (mean, scaled)	58.5 (99.9 by June 2025)	11.3	Demand 5.2 times thinner in the regions
Best store (orders per day, scaled)	137.9	24.9	Best regional store about an eighth of the lowest break-even density (about 202 a day)
Average basket (Rp)	177,857	163,402	8.1% less revenue per order
Average store-to-customer distance (km)	4.67	5.44	16.5% longer per order
Density ratio, Jabodetabek to regions (July 2024 to May 2025)	3.5 times, rising to 59.7 times		Gap widening, not closing
Modelled contribution per order (Rp)	-7,275	-10,053	38% deeper loss per order in the regions
Share of national volume, start to end of window	75.6% to 100%	24.4% to 0%	Exit completed; final regional orders 30 April to 12 May 2025

Note. Contribution per order uses the measured 15.37% blended margin less pick-pack, packaging, systems, shrinkage and courier charges; the Rp 2,778 difference between regions decomposes into a basket effect of Rp 1,855 and a courier effect of Rp 923. Source: company transactional records; adapted from Pribadi (2026).

The consolidated network of June 2025 is a materially different operation from the annual average (Table 2 and Figure 1). Density per store rose by 70% (58.5 to 99.9 orders a day), mean fulfillment time fell by 59% (28.6 to 11.6 minutes), mean courier wait at the store fell by 64% (22.0 to 8.0 minutes) and mean end-to-end time fell by 35% (80.9 to 52.9 minutes), while the share of orders delivered within 30 minutes almost trebled from 6.7% to 18.7%. The five new stores return median end-to-end times of 43 to 58 minutes against 62 to 73 minutes for the closed stores, and the two surviving legacy stores are the fastest of all at 41 and 44 minutes. The cost of consolidation is geometric: with fewer stores the mean distance to the

customer rose by 29% (4.67 to 6.04 km) and mean travel time by 10% (29.3 to 32.2 minutes). Figure 1 shows the consequence. The in-store block, fulfillment plus courier wait, collapsed from 50.6 to 19.6 minutes, and travel, the one primary activity that consolidation lengthens rather than shortens, became the residual constraint. Closing more stores would not relieve it; only a denser network and a shorter handover can.

Table 2. The consolidated Jabodetabek network, June 2025

Store	Origin	Orders per day (scaled)	Median distance (km)	Median end to end (min)	Mean basket (Rp)
Lebak Bulus	Opened Jan 2025	138.0	5.95	49	198,460
Cawang	Opened Apr 2025	133.7	6.79	47	193,498
Tanjung Duren	Legacy estate	112.0	3.92	44	187,256
Bintaro	Legacy estate	94.2	4.06	41	183,669
Gading Serpong	Opened Jan 2025	83.4	5.72	47	172,167
Daan Mogot	Opened Nov 2024	73.0	4.30	58	194,797
Pluit	Opened Feb 2025	64.2	3.80	43	179,659
Network (seven stores)		699	4.93	47	188,470

Note. The twelve closed Jabodetabek stores returned median end-to-end times of 62 to 73 minutes over the window; the five new stores return 43 to 58 minutes. Source: company transactional records; adapted from Pribadi (2026).

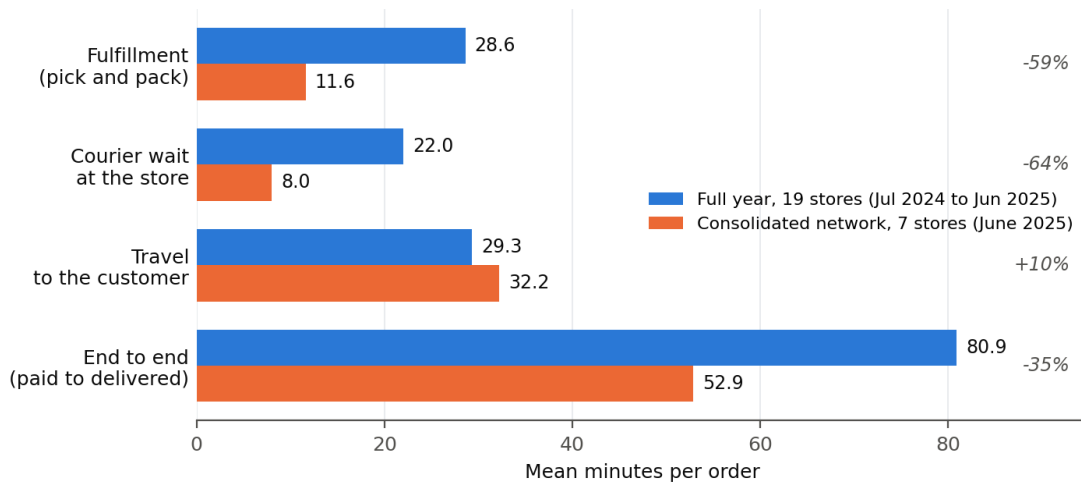


Figure 1. Where the constraint moved: mean minutes per order by block, full year (19 stores) versus the consolidated June 2025 network (7 stores). Consolidation collapsed the in-store block from 50.6 to 19.6 minutes and left travel as the residual constraint
Source: company transactional records; adapted from Pribadi (2026)

The Geography of the Consolidation

The transactional records carry no coordinates, so the geography of the consolidation had to be reconstructed before it could be read on a map. A subset of shipping addresses contains Open Location Codes, a public standard that encodes latitude and longitude deterministically and can therefore be decoded offline without a geocoding service. In the Jabodetabek records 37,231 orders (9.2%) carried a recoverable code; 99.98% of the decoded points fell inside the Jabodetabek bounding box, and every inspected point agreed with the district recorded in a separate field. Because each record also carries the store-to-customer distance, the position of every store was recovered by trilateration: a robust non-linear least-squares fit of each store's latitude, longitude and a distance scale factor to the constraints of its geocoded customers, which returned a median absolute error of 5.6 metres across the nineteen stores. The geocodable subset over-represents outlying addresses, with a mean distance of 5.55 km against 4.67 km for all orders, so the demand surface was reweighted by inverse sampling probability within store and distance-band strata; the reweighting restores the population mean distance and reproduces the population total to within 0.03%.



Figure 2. The national footprint in July 2024: 35 fulfillment points in 24 cities across twelve provinces, with the high-density Jabodetabek cluster

Source: adapted from Pribadi (2026)

Figure 2 shows the footprint the company started from: 35 fulfillment points in 24 cities across twelve provinces in July 2024, with the Jabodetabek cluster carrying about 88% of national orders. Figure 3 shows the reweighted demand surface at the end of the window, order density by sub-district across Jabodetabek. Demand is continuous rather than clustered: the densest sub-districts form a broad belt across West, Central and South Jakarta that continues into Depok, with further concentrations in South Tangerang, East Jakarta and Bekasi. Against

that surface the seven stores of June 2025 sit mainly in the west and centre: Daan Mogot and Tanjung Duren in West Jakarta, Pluit in North Jakarta, Bintaro and Gading Serpong in the Tangerang corridor, Lebak Bulus in South Jakarta and Cawang in the east. Management placed the five new stores near the busiest of its former supermarket-based locations, without a siting model. The map shows why that heuristic worked for density per store, and why it left the south and the east, where the surface is just as dark, farther from any store. The quantified reading of that gap, the share of demand within the promise and the number of stores a metropolitan promise would need, is reported in Pribadi (2026); for this article the map supplies the geometry behind the constraint migration in Figure 1. Consolidation raised density per store but lengthened the average trip because demand did not move when the stores did.

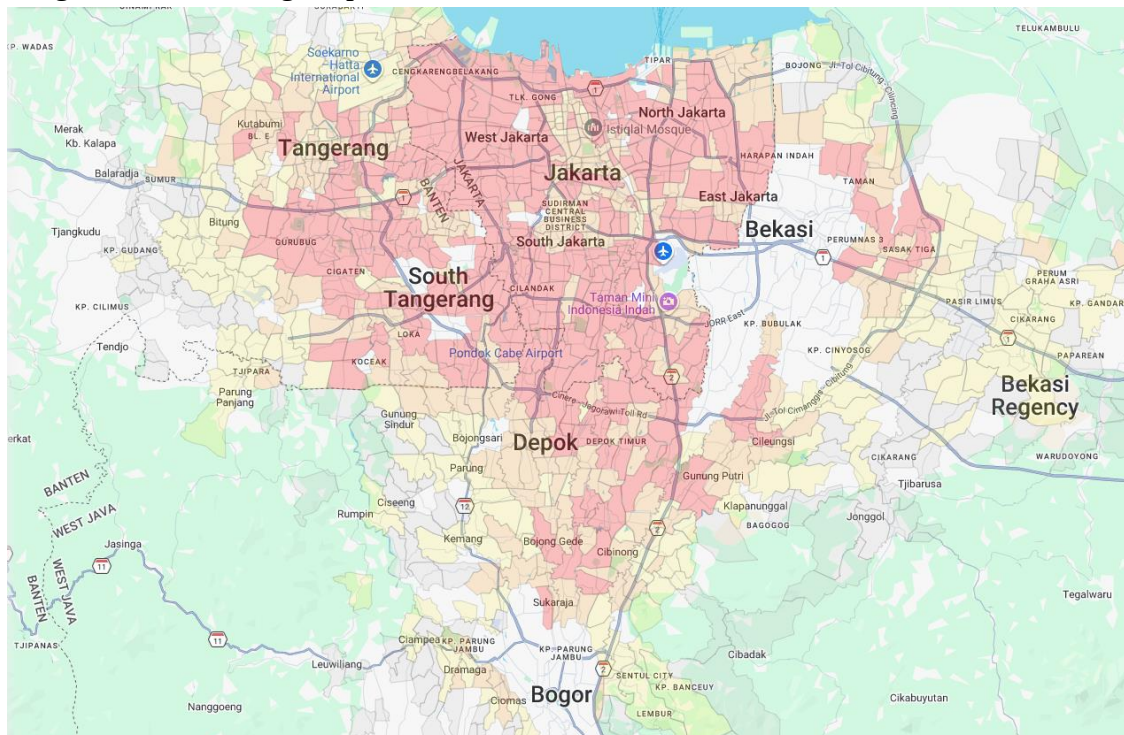


Figure 3. Order density by sub-district across Jabodetabek on the reweighted demand surface, June 2025 network. Shading classes by scaled order count: high (over 172), medium (46 to 172), low (6 to 46), very low (6 or fewer). Base map: Google Maps.

Source: company transactional records, geocoded and reweighted by the authors; adapted from Pribadi (2026).

Where Practitioners Locate the Constraints

Five themes emerged from the interviews, each stated here with its evidence and then checked against the data (Table 3). The first is that practitioners place the binding constraint inside the store rather than on the road. The operations area manager ranked delay causes with picking first, waiting-for-picking second and the search for a courier third, and described the mechanism at promotional peaks as a queueing cascade: short inter-arrival times overwhelm a team staffed to a forecast, waiting lengthens, picking lengthens, and the courier search lengthens last. The hub leader put pick-pack at five to six minutes for orders under five items and eight to nine minutes for ten items, longer when items are mis-slotted. The transactional record agrees that the fulfillment block was the largest controllable share of cycle time.

The second theme is that store layout, not picker effort, sets the fulfillment ceiling. In a supermarket the picker follows the retail floor plan and achieves 10 to 15 orders an hour, falling to 5 to 8 at peaks when fresh items need condition checks; in a purpose-built dark store, where items are slotted by velocity and frozen goods sit beside the packing station, the same picker achieves 20 to 30 orders an hour. At 7.3 items per order those rates translate to 73 to 110 items an hour against 146 to 219, which places the supermarket figure inside the store-based range reported by Hübner et al. (2016) and the dark-store figure in the lower half of their purpose-built range. The two- to three-fold difference is architectural, and it is what justified the capital spent on the five new stores.

The third theme is that information latency manufactures avoidable failure. Inventory synchronisation between the order and warehouse systems is near real-time, but latency of seconds to minutes remains, goods are not always placed at their stock location on time, and cycle-count adjustments arrive a day late. The hub leader reported one to two shelf stock-outs a day, each costing five to ten minutes to locate a mis-slotted item, and the product manager put stock-mismatch cancellations at 0.5% to 2% of orders. A two-hour promise absorbs these frictions; a 30-minute promise cannot, because a ten-minute search consumes a third of the budget. This is the failure mode that Yang et al. (2021) anticipate for just-in-time operation in turbulent demand: without a localised buffer, replenishment triggered by real-time signals and cross-tier visibility, speed promises break on availability before they break on delivery.

The fourth theme is that distance governs courier behaviour and that traffic is believed to be uncontrollable. The third-party logistics coordinator explained that platform riders are measured on completed deliveries a day, so they decline long trips even though the sender pays a flat fee, and the area manager named traffic as the one factor outside the company's control and proposed a smaller delivery radius as the remedy. The transactional record supports half of this belief. Distance matters, but congestion is not detected: median travel time in every distance band is the same at the 09:00 to 13:00 peak as off-peak, and the controllable part of the last mile turns out to be the fixed overhead of leaving the store, parking and finding the address, not the road.

The fifth theme is that margin is category-dependent and the assortment is concentrated. Sourcing and merchandising reported gross margins of 11% on dry food, 14% on non-food, 17% on chilled and frozen and 22% on fruit and vegetables, against an active range of roughly 7,000 items of which the top 500 account for 85% to 95% of orders. Two implications follow: the effective margin is a management decision expressed through basket mix and supplier terms rather than a fixed spread, and the range can be cut toward the quick-commerce norm of 1,500 to 2,000 items at limited demand risk. On readiness, the area manager put the operation at about 30% ready for a 30-minute promise within twelve months, citing non-dedicated riders, weak store-level forecasting and the absence of any feasibility simulation, while the product manager scoped real-time inventory synchronisation at three to five months on a mature technology stack or six to twelve on legacy architecture, and automated dispatch at two to four months.

Table 3. Interview themes, their evidence, and what the transactional record showed

Theme (roles)	What informants reported	Test against the record
1. The binding constraint sits inside the store (operations area manager, hub leader)	Delay causes ranked picking, waiting for picking, courier search; a queueing cascade at promotional peaks when demand exceeds the staffing forecast; pick-pack 5 to 6 minutes under five items, 8 to 9 minutes for ten	Fulfillment was the largest controllable block: 28.6 minutes on the full year, 11.6 after consolidation
2. Layout, not effort, sets the picking ceiling (hub leader)	10 to 15 orders per picker-hour in a supermarket, 5 to 8 at peaks; 20 to 30 in a purpose-built dark store slotted by velocity	Equivalent to 73 to 110 versus 146 to 219 items an hour, consistent with the 80 to 120 and 150 to 300 or more reported by Hübner et al. (2016); a 9-minute pick-pack budget and a 7-minute target
3. Information latency manufactures avoidable failure (product manager, area manager, hub leader)	Synchronisation lag of seconds to minutes; goods not put away on time; day-late cycle-count adjustments; one to two shelf stock-outs a day costing 5 to 10 minutes each; 0.5% to 2% stock-mismatch cancellations	Absorbed by a two-hour promise, disqualifying under 30 minutes; real-time synchronisation and automated dispatch treated as prerequisites
4. Distance governs courier behaviour; traffic believed uncontrollable (3PL coordinator, area manager)	Platform riders decline long trips because they are paid per completed delivery; traffic named as the one uncontrollable factor; smaller radius proposed	Distance matters, congestion does not: median travel time equal at peak and off-peak in every distance band; the controllable part is fixed handover overhead
5. Margin is category-dependent and the range is concentrated (sourcing and merchandising)	Gross margins 11% dry food, 14% non-food, 17% chilled and frozen, 22% fruit and vegetables; about 7,000 active items, top 500 carry 85% to 95% of orders	Effective margin is a management decision through mix and supplier terms; the range can be cut to 1,500 to 2,000 items at limited demand risk
Readiness (area manager, product manager)	About 30% ready for a 30-minute promise within twelve months; gaps are non-dedicated riders, store-level forecasting and the absence of feasibility simulation	Real-time synchronisation 3 to 5 months on a mature stack or 6 to 12 on legacy systems; automated dispatch 2 to 4 months

Note. Ten informants, five roles, 35 question-and-answer pairs coded with the six-phase procedure of Braun and Clarke (2006). Source: first author's interviews, July 2026; adapted from Pribadi (2026).

What the Diagnostic Frameworks Add

The five lenses were applied in the order external context, competitors, internal process, business model and synthesis (Table 4). The most material external factor is regulatory. The dedicated couriers work as business partners under Government Regulation No. 7 of 2021 rather than as employees (Republik Indonesia, 2021). Partner status is the legal basis for the fleet's capacity flexibility, and it is also the largest operational risk of the hybrid model: partners are not obliged to report for duty, so availability thins exactly when demand peaks, during promotions, religious holidays and bad weather. Availability can be incentivised but not

commanded, which is why an on-call surge buffer is retained rather than eliminated. Economically, the contraction of modern grocery retail that pushed the company off the supermarket's shelves also thins the demand on which every density gate depends. Socially, the Indonesian consumer evidence reviewed above says that a reliable 45-minute promise is likely to be worth more than an unreliable 30-minute one. Technologically, the enabling systems are a matter of months rather than years, but they are prerequisites, not the transformation itself.

Competitor benchmarking shows two categories in the same market. Specialists sell 15 to 30 minutes from dedicated dark stores with in-house riders; conventional e-grocers, including the case firm at the start of the window, sell one to two hours through partner stores and platform couriers. The specialists' promise is the benchmark, but their model rests on catchment densities the case firm does not have, and the international record is clear that matching a service level without the density that funds it produces larger losses rather than a better position (Schorung, 2024). The company's choice to exit sparse regions and thin its densest estate was therefore the right direction of travel even though the promise has not yet moved.

The value chain locates the constraint differently before and after consolidation. In the annual data the binding in-store activity was fulfillment at 28.6 minutes with courier wait a further 22.0, while travel at 29.3 minutes was fixed by network geometry; after consolidation fulfillment fell to 11.6 and courier wait to 8.0, leaving travel at 32.2 minutes as the residual constraint that outbound logistics cannot consolidate away. Upstream, procurement is the binding constraint on the margin side: supermarket-dependent sourcing fixed both assortment and margin, and the margin it fixed is below the level at which any configuration of this business is viable (Pribadi, 2026). Technology remains the enabling layer beneath both.

The Business Model Canvas names the components the transition disrupts most. The value proposition moves from a broad assortment delivered within two hours to a tiered promise built on a curated fast-moving range; the key resources move from access to a partner's shelves to contracted rider capacity; and the cost structure and revenue streams are the most disturbed components, because the business cannot fund a quick-commerce cost base on its measured blended margin of 15.37% or on a distance-insensitive platform tariff. Autonomous procurement and a dedicated partner fleet are therefore preconditions for viability rather than efficiency projects, although necessary rather than sufficient ones. The SWOT synthesis that closes the diagnostics is asymmetric in a way that matters: the strengths and opportunities, dense demand, a fast consolidated estate, a curated range and a tiered promise, are largely built, whereas the weaknesses and threats, thin margin, a courier cost floor, partner availability and travel geometry, are conditions the plan must meet before the promise can be sold at all. The roadmap below writes those conditions as its gates.

Table 4. What the five diagnostic lenses add to the plan

Lens	Key finding	Consequence for the plan
PESTEL	Regulatory: riders are business partners under Government Regulation No. 7 of 2021, so capacity can be scaled but not commanded. Economic: modern grocery retail is contracting. Social: reliability and price are rewarded over speed. Technological: synchronisation and dispatch are 3 to 12 months away	Keep an on-call surge buffer; sell a tiered promise; treat technology as a foundation
Competitor Benchmarking	Specialists sell 15 to 30 minutes from dark stores with in-house riders; conventional e-grocers sell one to two hours through partner stores and platform couriers; matching the specialists without their density deepens losses	Match the promise only where density exists; exit sparse regions and thin the dense estate
Value Chain	The binding step moved: the in-store block fell from 50.6 to 19.6 minutes while travel rose from 29.3 to 32.2 and became the residual constraint; upstream, supermarket-dependent procurement fixed assortment and margin	Densification and handover discipline for travel; procurement as the gate on margin
Business Model Canvas	Value proposition moves from broad assortment in two hours to a curated fast-moving range sold in tiers; key resources move from shelf access to contracted rider capacity; cost structure and revenue streams are the most disrupted blocks	Own procurement and a dedicated partner fleet are preconditions for viability, necessary but not sufficient
SWOT	Asymmetric: strengths and opportunities are largely built (dense demand, a fast consolidated estate, a curated range, a tiered promise); weaknesses and threats (thin margin, courier cost floor, partner availability, travel geometry) are conditions still to be met	Write the weaknesses and threats as the gates of the roadmap

Note. Lenses applied in the order external context, competitors, internal process, business model and synthesis. Source: authors' analysis; adapted from Pribadi (2026).

Five Levers, Sequenced by Executability and Reversibility

Four results reframe the problem. Most of the operational gain from consolidation has already been banked. The platform courier tariff is the largest destroyer of value, because it is flat below eight kilometres and therefore returns none of the density the company built to the company itself. No configuration of the business is viable at the measured margin of 15.37%, and the assortment mix alone cannot lift it, so the margin must come from supplier terms. And a 45-minute promise reaches about 60% of demand from the existing seven stores without capital, against about 23% for a 30-minute promise (Pribadi, 2026). The solution that follows is five levers deployed in a deliberate order, from the change that is easiest to execute and to reverse toward the one that should not be attempted until the others have taken effect (Table 5).

The first lever is the courier contract, which is the fastest and largest recoverable value. Replacing the on-call platform with a stationed dedicated partner fleet on the contracted scheme of Rp 175,000 guaranteed a day plus Rp 15,000 for each delivery beyond eight brings cost per order from the platform mean of Rp 22,775 to about Rp 18,000, a saving of roughly Rp 4,600, of which about Rp 1,500 was still uncollected at the June 2025 mix of 70.6% dedicated deliveries. A minority on-call share of about 15% is kept for peaks. The lever needs no capital, no technology and no change to the promise, and it is the only way the company can keep the gains from density: under the flat tariff every increase in density flows to the platform, not to the firm. Even so, Rp 18,000 remains above the roughly Rp 12,294 per delivery that the renegotiated margin can afford at current density, so this lever alone does not close the gap.

The second lever is the margin architecture, which gates everything else. The company has already realised 1.69 percentage points of margin by ending the supermarket partner's 2% share of procurement cost, taking the blend from 13.68% to 15.37%. The 2.63-point distance to the 18% target cannot be closed by mix, because reaching 18% through assortment alone would require fruit and vegetables to make up 54% of sales; it has to come from supplier terms as procurement moves directly to suppliers, with 17.02% as the calibrated target and roughly Rp 3,110 per order as its value. Cutting the range from about 7,000 to 1,500 to 2,000 fast-moving items is a low-risk companion initiative, valuable for shorter pick paths and fewer mis-slotted long-tail items rather than for margin.

The third lever is the handover overhead, which is the highest-return lever and belongs to nobody. The fixed overhead of leaving the store and reaching the door, estimated at 11.19 minutes on pickup-to-completion data, includes a four-minute location-access allowance inside the delivery budget. Address quality, contact verification, pre-arrival notification and staging of the order can halve that allowance, which releases four minutes into the riding budget, lifts road reach from about 4.1 to 4.8 kilometres and demand covered within 30 minutes from 23.1% to 29.8%, and to about 33% when combined with faster pick-pack. None of this varies with traffic and none of it costs capital, yet because operational management views delivery through a traffic lens the overhead is currently unmanaged.

The fourth lever is a tiered promise that sells what the network can keep: 30 minutes in the near zone, 45 in the middle band and 60 farther out, which meets about 60% of demand at 45 minutes and 76% at 60 minutes from the existing estate. The tier converts the 30-minute promise from a uniform commitment into a product feature whose footprint grows with density, and it is consistent with what Indonesian customers reward. The fifth lever is the network, treated as a density gate rather than a build plan. The candidate zones ranked on the order heatmap are monitored, and a dark store is opened only when the near-zone catchment sustains the break-even density its lease requires at the renegotiated margin, roughly 277 orders a day for a small-format store. The same test governs any regional re-entry.

Deployed in this order, the first four levers move contribution per order from about minus Rp 10,633 at the June 2025 mix to about minus Rp 5,894 on the existing estate, with no new lease and every step testable and reversible on its own. Contribution turns positive only once store density and picking productivity reach the benchmark of 600 to 700 orders a day that Schorung (2024) reports operators using, and the promise is lifted to 45 minutes for the

majority of demand along the way. Deployed in any other order, and most of all network first, the obvious move of adding stores to add orders deepens the loss on every one of them.

Table 5. Five levers in the order they should be deployed

Lever	Action	Effect on per-order economics	Why this position
1. Courier Contract	Replace the on-call platform with a stationed dedicated partner fleet (Rp 175,000 guaranteed a day plus Rp 15,000 per delivery above eight); keep about 15% on-call	About Rp 4,600 saved per order against the platform mean (Rp 22,775 to about Rp 18,000); about Rp 1,500 still uncollected at the June 2025 mix; still above the Rp 12,294 the renegotiated margin affords	Fastest; no capital, no technology, no change to the promise; reversible
2. Margin Architecture	Renegotiate supplier terms as procurement moves direct; rationalise the range to 1,500 to 2,000 items	Blended margin 15.37% to 17.02%, about Rp 3,110 per order; the 2.63-point gap to 18% cannot be closed by mix alone	Gates every other lever; within the company's own control
3. Handover Discipline	Address quality, contact verification, pre-arrival notification, order staging	Halving the 4-minute access allowance releases 4 riding minutes: reach 4.1 to 4.8 km, coverage within 30 minutes 23.1% to 29.8%, about 33% with faster pick-pack	Zero capital; independent of traffic; currently owned by nobody
4. Tiered Promise	30, 45 and 60 minutes by zone across the seven stores	About 60% of demand within 45 minutes and 76% within 60 minutes with no new lease	Sells what the network can keep; reliability is what customers reward
5. Network as a Density Gate	Open a store only when the near-zone catchment sustains the lease's break-even density (about 277 orders a day for a small format at 17.02%)	Contribution turns positive only at benchmark density (600 to 700 orders a day) with pick-pack productivity	Last; capital only after demonstrated demand; the same test governs regional re-entry

Note. With the first four levers in place, contribution per order improves from about –Rp 10,633 at the June 2025 mix to about –Rp 5,894 on the existing estate. Thresholds from the models reported in Pribadi (2026).

A Roadmap Gated by Triggers, Not Dates

The implementation plan stages the five levers so that each commitment is released only when its economic condition has been demonstrated (Figure 4 and Table 6). It deliberately carries no launch date for the 30-minute promise, because the analysis shows that date to be a function of demand growth and therefore not something a project plan can set. Phase zero is the consolidation already executed. Phase one, months zero to four, is the courier contract, advanced when dedicated riders carry at least 70% of deliveries, cost per delivery is at or below Rp 19,000 and trending toward Rp 18,000, and courier wait at the store is at or below five minutes. Phase two, months zero to eight, is margin and foundation: renegotiated category margins, autonomous fresh procurement, a rationalised range, real-time inventory synchronisation and automated dispatch, advanced when blended margin reaches 17% on the way to 18%, pick-pack cost is at or below Rp 3,000 an order and stock-mismatch cancellations fall below 1%. Phase three, months six to fourteen, is handover discipline and the zoned promise across the seven stores, advanced when handover overhead is at or below eight

minutes, 45-minute compliance in the middle band reaches 90% and coverage of about 60% is confirmed.

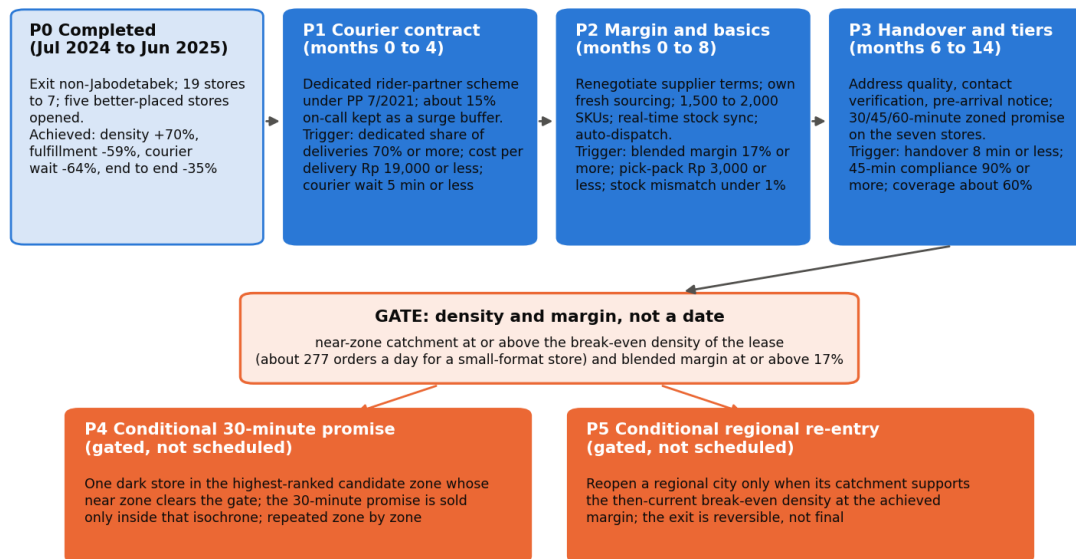


Figure 4. The trigger-gated roadmap. Phases P1 to P3 are scheduled within the existing estate; P4 and P5 open only when the density-and-margin gate is met

Source: adapted from Pribadi (2026)

Phases four and five are conditional. A 30-minute promise is launched in one candidate zone only when its near-zone catchment clears the small-format break-even of about 277 orders a day and blended margin holds at 17%, and it is extended zone by zone on the same test; regional re-entry is decided city by city on the same density-and-margin test at the then-current break-even. Six supporting actions make the plan operable: fix the courier contract first, not last; sequence margin ahead of speed; treat technology as a foundation rather than a separate layer; manage the handover overhead as a named key performance indicator with an owner; gate the network on near-zone density rather than on coverage targets; and re-run routed isochrones over the road network before any lease is signed, because the straight-line radius overstates what a store can reach.

Table 6. Phased roadmap with owners and trigger metrics

Phase	Promise	Actions and owner	Trigger to advance
P0 Completed (July 2024 to June 2025)	2 hours	Exit non-Jabodetabek; consolidate 19 stores to 7; open five better-placed stores (management)	Achieved: density +70%, fulfillment time –59%, end-to-end time –35%, regional volume to zero
P1 Courier Contract (months 0 to 4)	2 hours	Deploy the dedicated partner scheme; recruit hub-proximate riders as partners under PP 7/2021; keep about 15% on-call for overflow (operations, 3PL)	Dedicated share of deliveries 70% or more; cost per delivery Rp 19,000 or less, trending to Rp 18,000; courier wait 5 minutes or less
P2 Margin and Foundation (months 0 to 8)	2 hours	Renegotiate category margins; begin autonomous fresh procurement; rationalise the range; deploy real-time inventory synchronisation and automated dispatch (sourcing, product)	Blended gross margin 17% or more, targeting 18%; pick-pack cost Rp 3,000 or less; stock-mismatch cancellations under 1%; automated dispatch live
P3 Handover and Tiered Promise (months 6 to 14)	45 minutes, zoned	Enforce address quality, contact verification and pre-arrival notification; staff to the 09:00 to 13:00 peak; launch the 30/45/60-minute zoned promise across the seven stores (operations)	Handover overhead 8 minutes or less; 45-minute compliance 90% or more in the middle band; coverage of about 60% confirmed; gross margin 17% or more
P4 Conditional 30-minute Promise (gated)	30 minutes, near zone	Open one dark store in the highest-priority candidate zone whose near zone clears the gate; run 30 minutes only inside its isochrone; expand zone by zone (operations, commercial)	Gate: near-zone catchment at or above the small-format break-even density (about 277 orders a day) and gross margin 17% or more; until met, do not build
P5 Conditional Regional Re-entry (gated)	Tiered	Reopen selected regional cities on the same density-and-margin test (management, commercial)	Gate: city catchment supports the then-current break-even density at the achieved margin; the exit is reversible, not terminal

Note. Phases P1 to P3 need no new lease and can each be tested and reversed on their own.
Source: adapted from Pribadi (2026).

Discussion

Three findings carry beyond the case. The first is that for an incumbent, sequence is a result, not a preference. The five levers differ by an order of magnitude in capital, reversibility and lead time, and the viability arithmetic says that the cheap and reversible ones, contract and negotiation, must precede the expensive and irreversible one, leases, because a store opened before margin and density are in place adds its own loss to the network's. This inverts the intuition that speed is won by building. It also aligns the roadmap with the constraint-migration reading of the value chain: the binding constraint moved from the store to the road, and the next constraint after handover is density, so the plan moves with it rather than ahead of it.

The second finding is that the practitioners' map of the problem is half right, and the half that is wrong is expensive. They correctly place the largest controllable delay inside the store and correctly identify layout and information latency as its causes; the five new stores and the technology prerequisites follow directly from that diagnosis. They incorrectly attribute the last-

mile delay to congestion, and the natural response to that belief, a smaller radius, would shrink reach without saving time or, under a flat tariff, money. The measured record locates the delay in the fixed handover overhead that no function owns. Structured diagnostics earned their place here precisely by separating the beliefs the data supports from those it does not.

The third finding is that the regulatory form of the fleet shapes the operating model. Because riders are business partners rather than employees, a fully dedicated fleet is never recommended: capacity can be scaled and incentivised but not commanded, so a surge buffer of on-call capacity is a permanent feature rather than a transitional one. This is a design constraint that network models built on employed fleets do not carry, and it is likely to hold for other Indonesian operators under the same regulation. Combined with the consumer evidence that reliability is rewarded more than speed (Billman et al., 2024; Monoarfa et al., 2023), it argues for selling a promise that the partner fleet can keep on a bad day rather than the fastest promise it can keep on a good one.

For other second-generation e-grocers in emerging markets the transferable lesson is procedural. Measure the cycle-time blocks and find where the constraint sits now, not where it sat when the operation was designed; test each belief about delay against the timestamps; price the levers by executability and reversibility before pricing them by size; and write the roadmap as gates on density and margin rather than as dates. The numbers will differ; the order is likely to hold.

Limitations

The study is a single case, and its thresholds are specific to one firm's leases, margins and contracts. Order volumes are rescaled for confidentiality, so absolute densities are internally consistent but not externally quotable, although every ratio and every cost-derived gate is unaffected. The interview sample is ten informants in five roles inside the company and its logistics partner; customers were not interviewed, and the consumer evidence is drawn from published Indonesian samples. The second margin gain that the roadmap assumes depends on a negotiated outcome, and the sourcing evidence from the small stores points to harder terms for fresh and branded suppliers; the plan is therefore gated on margin rather than built on it. The travel-time finding is descriptive and was not tested inferentially. Finally, the viability thresholds used to gate the phases are taken from the models in Pribadi (2026) and inherit their assumptions, including a static time budget and deterministic isochrones; a discrete-event simulation of peak-hour cascades and an out-of-sample validation of the travel-time model are the natural next steps.

CONCLUSION

An Indonesian e-grocery incumbent built on supermarket shelves and on-demand courier networks cannot achieve a 30-minute delivery promise simply by expanding its infrastructure. The company's data indicate that the consolidation implemented during 2024–2025 was justified across operational dimensions and captured most of the available efficiency gains; however, it also shifted the primary constraint from store-based fulfillment to last-mile delivery. Operational practitioners identified the remaining constraints as store layout, information latency, and courier handover processes, while transactional records confirmed the first two and provided a different interpretation of the third. Five diagnostic lenses translated

these constraints into actionable conditions and established an implementation sequence: courier contracts, margin architecture, handover discipline, and a tiered delivery promise should be prioritized within the existing operational footprint because they are more reversible, while network capital expansion should be committed only after zone-level density and blended margin thresholds are achieved. The delivery promise is not abandoned; rather, it is repositioned as a growth option that each market catchment must demonstrate sufficient viability to support.

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